

#### ABSTRACT

This invention relates to a process for producing a sugar nucleotide, in which a) a culture broth of a microorganism capable of producing NTP from a nucleotide precursor, or a treated product of the culture broth, and b) a culture broth of a microorganism capable of producing a sugar nucleotide from a sugar and NTP, or a treated product of the culture broth, are used as enzyme sources; a process for producing a complex carbohydrate, in which the above-described a) and b) and c) a culture broth of a microorganism, an animal cell or an insect cell capable of producing a complex carbohydrate from a sugar nucleotide and a complex carbohydrate precursor, or a treated product of the culture broth, are used as enzyme sources; a process for producing a complex carbohydrate, in which a culture broth of a microorganism, an animal cell or an insect cell capable of producing a complex carbohydrate from a sugar nucleotide and a complex carbohydrate precursor, or a treated product of the culture broth, is as an enzyme source; and a process for producing N-acetylglucosamine-1-phosphate, in which a culture broth of a microorganism having strong galactokinase activity, or a treated product of the culture broth, is used as the enzyme source.